



Wireless Device Over the Air Performance Test Report

REPORT NO.	OQ422340
APPLICANT	: Apption Labs Limited
MANUFACTURER	: AboCom Systems, Inc.
EQUIPMENT	: Normal Sample
DATE OF RECEIPT	: March 4, 2023
DATE OF TEST	: March 11, 2023
ISSUE DATE	: November 15, 2024

Reviewed by:


SPORTON LAB.

Tim Kao / Vice Manager

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

The declared product specification for EUT presented in this report is provided by the manufacturer / applicant, and the manufacturer / applicant takes all the responsibilities for the accuracy of product specification.

SPORTON INTERNATIONAL INC.



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
OQ422340	1.0	Initial issue of report	September 19, 2024
OQ422340	2.0	Correct the title of the antenna frequency.	November 15, 2024

1. Test Laboratory

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Telephone Number	TEL: +886-3-327-3456; FAX: +886-3-328-4978
Address	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan
Chamber	☐ OTA01-HY ☐ OTA03-HY ☐ OTA04-HY ☒ OTA05-HY

☒ : The chamber(s) which used to perform the test in this test report.

2. Client Information

2.1 Applicant

Company Name	Apption Labs Limited
Address	66 Commercial Square, Leicester, LE2 7SR United Kingdom
Contact Person	James H. Hardy / jimbo@meater.com
Telephone Number	FCC : (+44)7553511807 IC : (+44)7553511807 ACMA : (+44)7553511807

2.2 Manufacturer

Company Name	Apption Labs Limited
Address	No. 77, Yu-Yih Rd, Chu-Nan Chen, Miao-Lih Hsuan, Taiwan, R.O.C.
Contact Person	Jane Liang / jane.liang@abocom.com.tw
Telephone Number	886-37-580-777

3. Device Under test(DUT) Information

3.1 Description of DUT

Product Feature & Specification	
EUT Type	Normal Sample
Brand Name	MEATER
Model Name	MT-XL20
Antenna Type	PCB

4. Measurement Environment

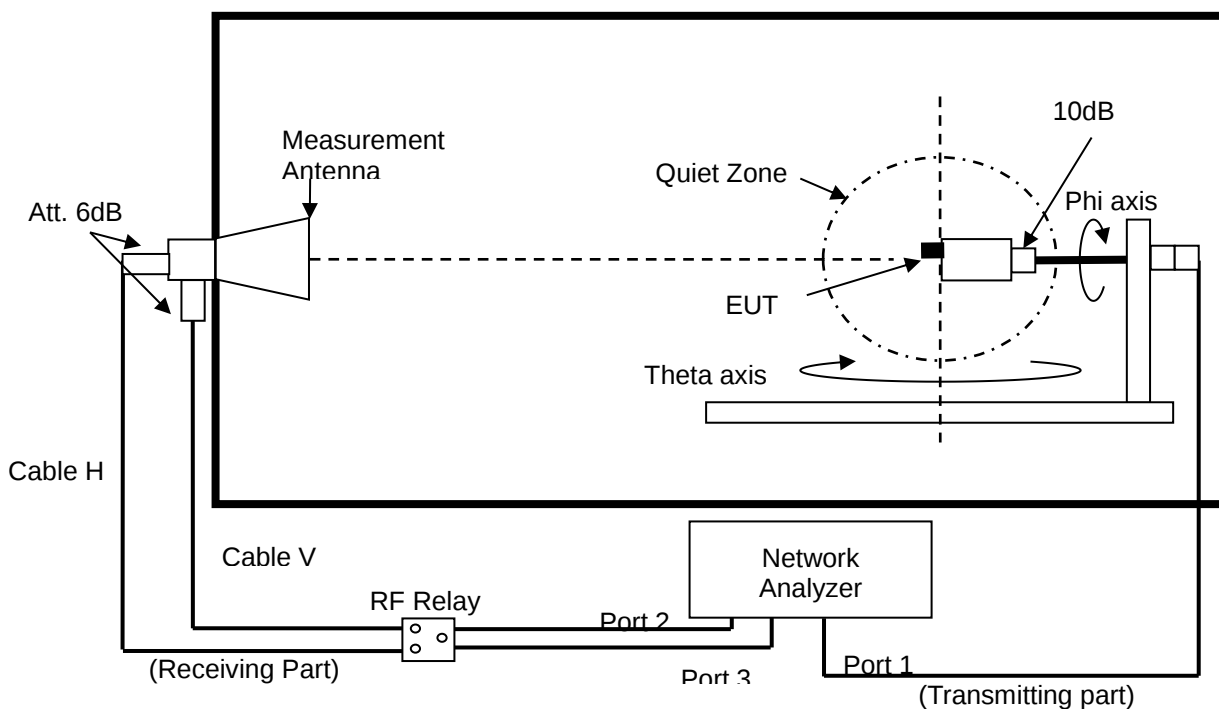
Ambient Condition

Temperature (°C):	25°C +/- 5°C	Humidity (%):	<60%
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Test Equipment List

Name	Manufacturer	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
ENA Series Network Analyzer	Keysight	E5071C	MY46417800	2023/09/25	2024/09/24
RF Switch	Keysight	3499A	N/A	NCR	NCR
Multi-Axis Positioner Controller	ETS-Lindgren	2090	N/A	NCR	NCR
Medium-Duty Positioner	ETS-Lindgren	2015	N/A	NCR	NCR
Measurement Horn Antenna	EMCO	3164-06	00126510	NCR	NCR

Passive measurement setup



5. Summary of Test Results

5.1 Declaration

Declaration of Conformity:
The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.
Comments and Explanations:
None

5.2 Abbreviations and Definitions

Please note the following abbreviations in this section:

FS = Free Space

5.3 Summary Table

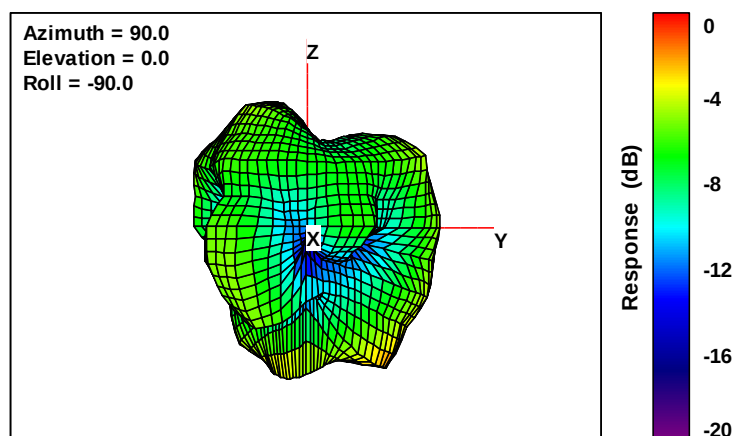
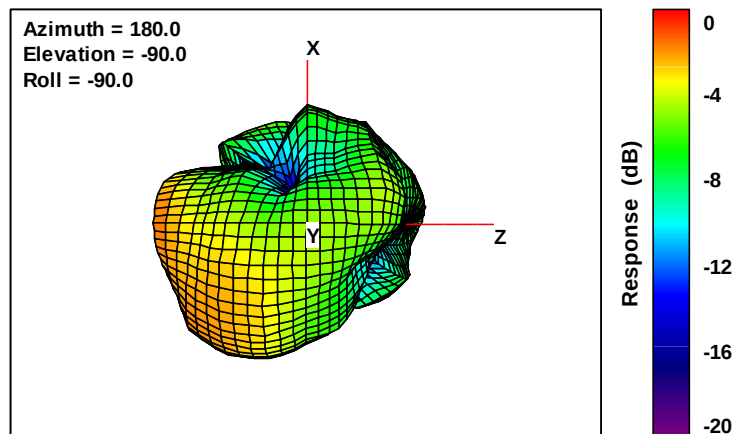
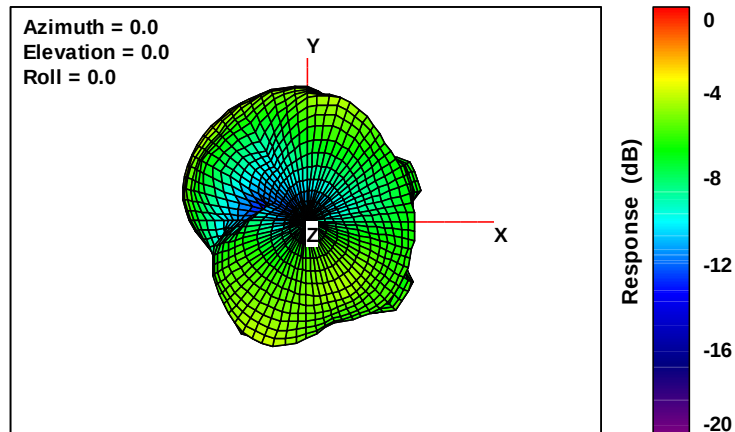
Apption Labs Limited_Block2_WIFI_Gain_FS_2400-2483.5MHz_Step15					
Frequency (MHz)	Ant. Port Input Pwr. (dB)	Gain (dBi)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)
2400	0.0	1.33	6.98	-5.66	27.18
2441	0.0	1.72	7.09	-5.37	29.04
2483.5	0.0	1.74	6.73	-4.99	31.68

WiSA_PCB antenna_2400-2483.5MHz_Ant2_Step15					
Frequency (MHz)	Ant. Port Input Pwr. (dB)	Gain (dBi)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)
2400	0.0	-1.22	4.99	-6.21	23.92
2441	0.0	0.19	5.61	-5.43	28.64
2483.5	0.0	0.55	5.90	-5.35	29.17

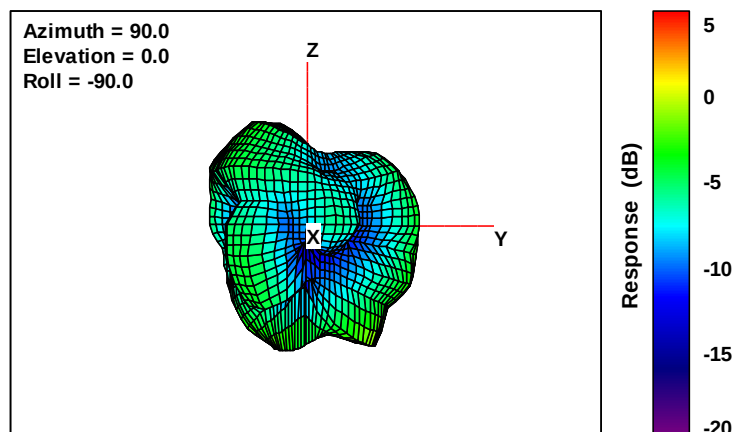
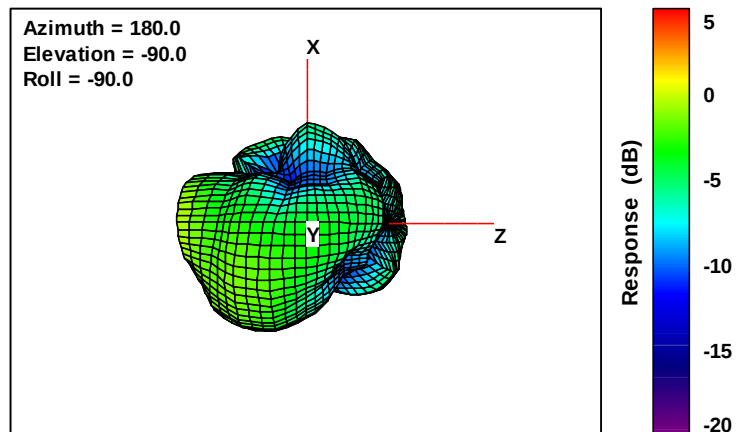
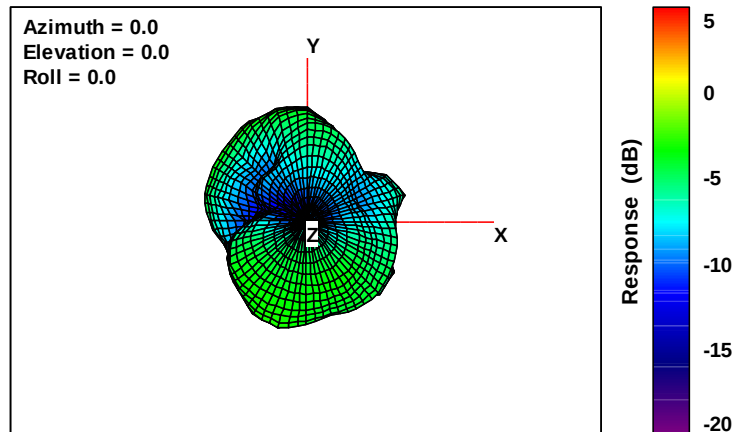
Appendix A 3D Pattern

Appendix A.1.1 BLE_Gain

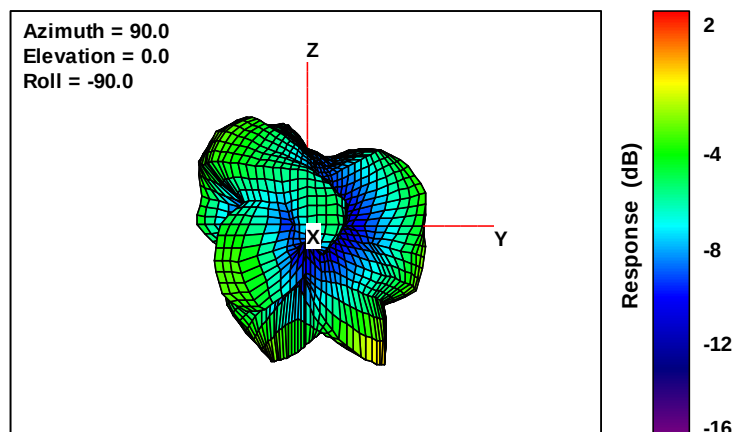
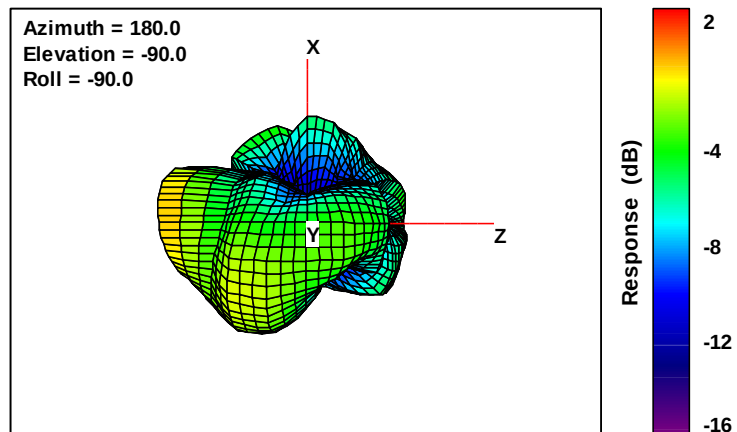
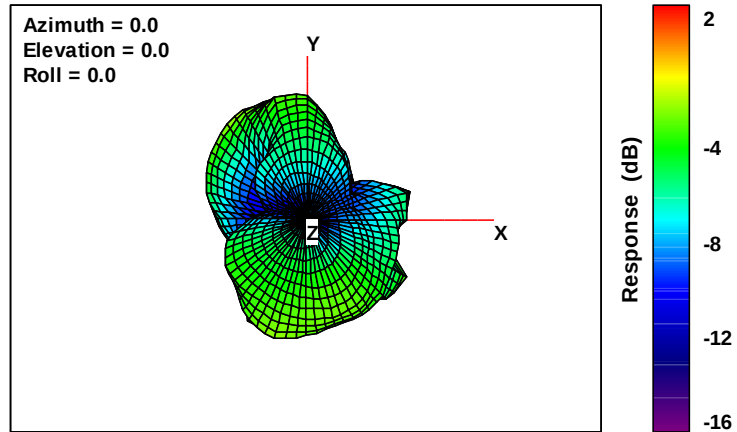
2400MHz



2441MHz

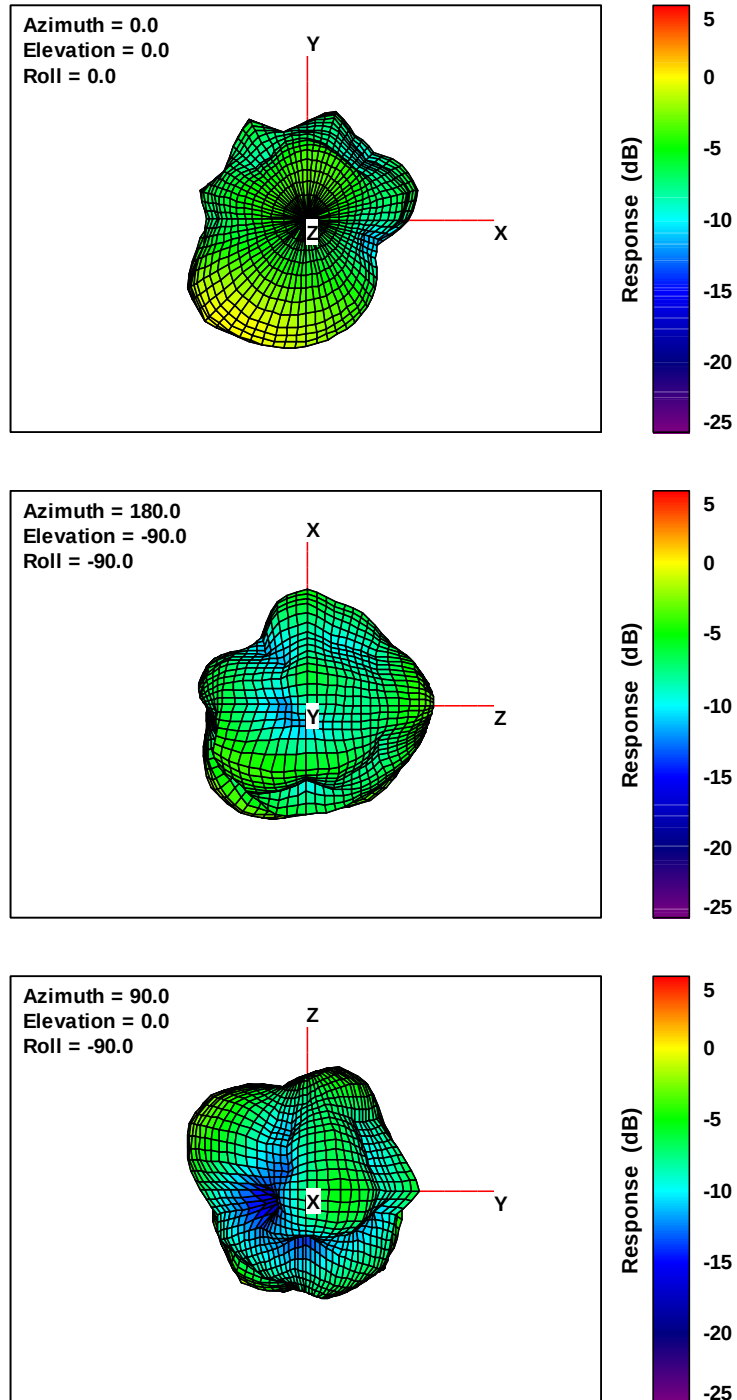


2483.5MHz

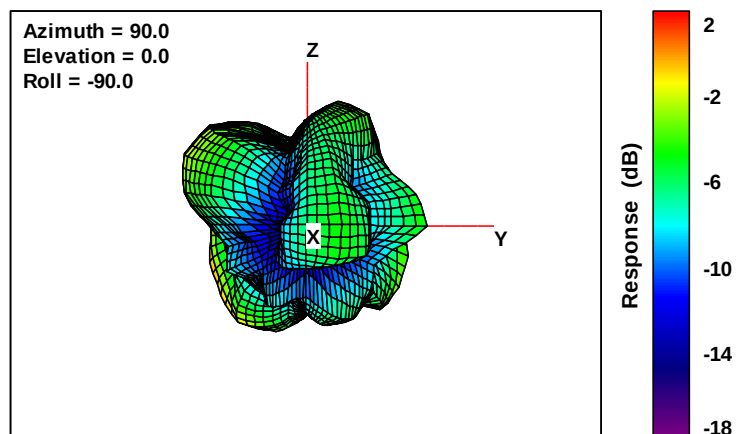
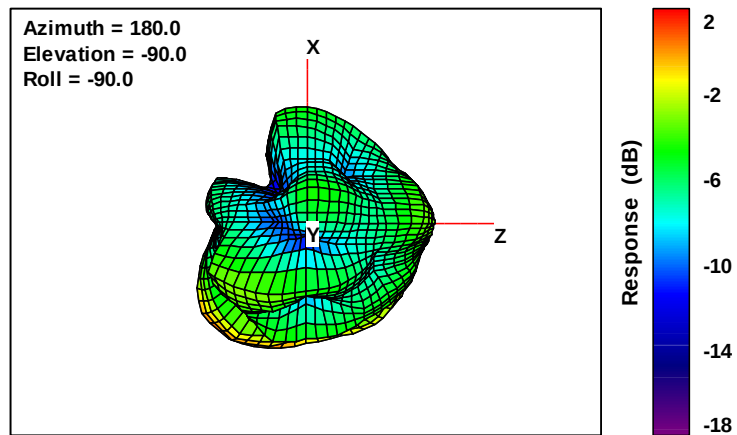
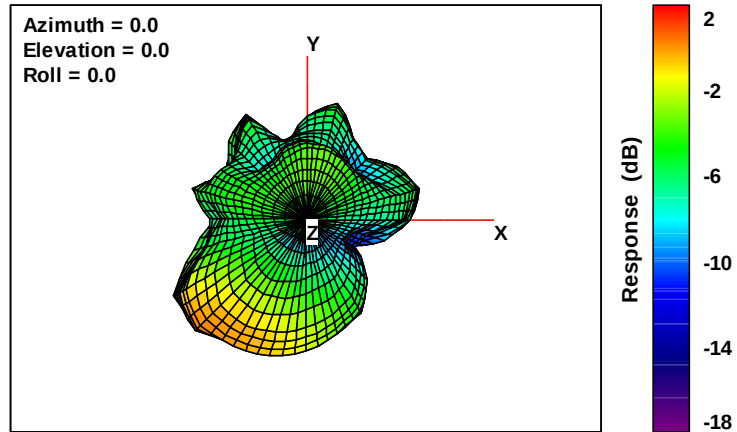


Appendix A.1.2 WIFI_Gain

2400MHz



2441MHz



2483.5MHz

